

GOES-R satellite magnetometer boom deployment successful

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The GOES-R Magnetometer Engineering Development Unit made an important development in the construction of the spacecraft recently after completing a successful boom deployment test at an ATK facility in Goleta, Calif.

The Geostationary Operational Environmental Satellite – R Series advanced spacecraft and instrument technology will result in more timely and accurate weather forecasts. It will improve support for the detection and observations of [meteorological phenomena](#) and directly affect public safety, protection of property, and ultimately, economic health and development.

The magnetometer boom will deploy after the GOES-R spacecraft launches, separates from its [launch vehicle](#) and undergoes a series of orbit-raising maneuvers. The magnetometer will provide measurements of the space environment magnetic field, which controls charged particle dynamics in the outer region of the magnetosphere. These particles pose a threat to spacecraft and human spaceflight.

"First deployment is always exciting, and all the dynamic effects involved in the stowing and deploying need to be understood and characterized," said Monica Todirita, instrument manager for the magnetometer on the GOES-R Project at NOAA's National Environmental Satellite, Data, and Information Service, Silver Spring, Md. "With first deployment we proved that the design principle of the magnetometer boom for our application is functional and reliable."

GOES-R will be more advanced than NOAA's current GOES fleet. The satellites are expected to more than double the clarity of today's GOES imagery and provide more atmospheric observations than current capabilities with more frequent images.

"In geosynchronous orbit, Earth's magnetic field can go through huge variations; sometimes nearly doubling in strength and at other times reversing direction. GOES-R will monitor these variations and enable forecasters at NOAA's Space Weather Prediction Center to better predict the consequences of [geomagnetic storms](#)," said Howard Singer, chief scientist, NOAA's Space Weather Prediction Center, Boulder, Colo.

Provided by NASA's Goddard Space Flight Center

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